

LEMBAR
HASIL PENILAIAN SEJAWAT SEBIDANG ATAU PEER REVIEW
KARYA ILMIAH : JURNAL ILMIAH

Judul Karya Ilmiah (Artikel) : Modeling of Air Pollutants SO₂ Elements using Geographically Weighted Regression (GWR), Geographically Temporal Weighted Regression (GTWR) and Mixed Geographically Temporal Weighted Regression (MGTWR)

Jumlah Penulis : 2 Orang Penulis ke : 2

Nama Penulis : Kukuh Winarso, **Hasbi Yasin**

Identitas Jurnal Ilmiah

a. Nama Jurnal : ARPN Journal of Engineering and Applied Sciences

b. Nomor ISSN : 1819-6608

c. Volume, No, Bulan, Tahun : Vol. 11 No. 13, July 2016

d. Penerbit : Asian Research Publishing Network

e. DOI artikel (jika ada) : -

f. Alamat web jurnal : http://www.arpnjournals.org/jeas/research_papers/rp_2016/jeas_0716_4566.pdf

g. Indexing : Scopus Q3

Kategori Publikasi Jurnal Ilmiah : ☒ Jurnal Ilmiah Internasional / Internasional Bereputasi

(beri ✓ pada kategori yang tepat) ☐ Jurnal Ilmiah Nasional Terakreditasi

☐ Jurnal Ilmiah Nasional/Nasional Terindeks di DOAJ, CABI

Hasil Penilaian *Peer Review* :

| Komponen Yang Dinilai | Nilai Reviewer | | Nilai Rata-rata |
|---|----------------|-------------|-----------------|
| | Reviewer I | Reviewer II | |
| a. Kelengkapan unsur isi buku (10%) | 3 | 3 | 3 |
| b. Ruang lingkup dan kedalaman pembahasan (30%) | 10 | 9,7 | 9,85 |
| c. Kecukupan dan kemutakhiran data/informasi dan metodologi (30%) | 10 | 10,2 | 10,1 |
| d. Kelengkapan unsur dan kualitas penerbit (30%) | 10 | 9,5 | 9,75 |
| Total = (100%) | 33 | 32,4 | 32,7 |

Reviewer 2



Drs. Sudarno, M.Si
NIP. 19640709 199201 1 001

Unit kerja :
Departemen Statistika Undip

Semarang, 14 April 2019
Reviewer 1



Dr. Rukun Santoso, M.Si
NIP. 19650225 199201 1 001

Unit kerja :
Departemen Statistika Undip

LEMBAR
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Hasil Penilaian *Peer Review* :

| Komponen Yang Dinilai | Nilai Maksimal Jurnal Ilmiah | Nilai Akhir Yang Diperoleh |
|---|---|----------------------------|
| | Internasional/ Internasional Bereputasi ** | |
| | 40 | |
| a. Kelengkapan unsur isi buku (10%) | 4 | 3 |
| b. Ruang lingkup dan kedalaman pembahasan (30%) | 12 | 9,85 |
| c. Kecukupan dan kemutakhiran data/informasi dan metodologi (30%) | 12 | 10,1 |
| d. Kelengkapan unsur dan kualitas penerbit (30%) | 12 | 9,75 |
| Total = (100%) | 40 | 32,7 |

Reviewer 2



Drs. Sudarno, M.Si
NIP. 19640709 199201 1 001

Unit kerja :
Departemen Statistika Undip

Semarang, 19 April 2019
Reviewer 1



Dr. Rukun Santoso, M.Si.
NIP. 19650225 199201 1 001

Unit kerja :
Departemen Statistika Undip

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| b. Ruang lingkup dan kedalaman pembahasan (30%) | 12 | | | | | 10 |
| c. Kecukupan dan kemutakhiran data/informasi dan metodologi (30%) | 12 | | | | | 10 |
| d. Kelengkapan unsur dan kualitas penerbit (30%) | 12 | | | | | 10 |
| Total = (100%) | 40 | | | | | 33 |
| Kontribusi Pengusul (Penulis Anggota) | | | | | | 16 (40%) |

Komentar *Peer Review*:

- a. Kelengkapan dan kesesuaian unsur:
Cakup lengkap
- b. Ruang lingkup dan kedalaman pembahasan:
Kurang direview dengan baik
- c. Kecukupan dan kemutakhiran data/informasi dan metodologi:
Kekurangan tidak tergambar
- d. Kelengkapan unsur dan kualitas penerbit:
Belum maksimal
- e. Indikasi Plagiasi:
Tidak ada
- f. Kesesuaian bidang ilmu:
Sesuai dengan bidangnya

Semarang, 13-8-2019
 Reviewer 1

[Signature]

Dr. Rukun Santoso, M.Si.
 NIP. 19650225 199201 1 001

Unit kerja:
 Departemen Statistika Undip
 Jabatan Fungsional:
 Lektor Kepala

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| Total = (100%) | 40 | | | | | 32,4 |
| Kontribusi Pengusul (Penulis Anggota) | | | | | | 16 (40%) |

Komentar Peer Review:

- a. Kelengkapan dan kesesuaian unsur:
 Hasil penelitian belum terikat pada abstrak

- b. Ruang lingkup dan kedalaman pembahasan:
 Kedalaman pembahasan kurang
 Hasil kurang meyakinkan

- c. Kecukupan dan kemutakhiran data/informasi dan metodologi:
 -- Posisi penelitian dan kebaruan belum tampak
 -- Model tidak sesuai judulnya

- d. Kelengkapan unsur dan kualitas penerbit:
 Kualitas cukup

- e. Indikasi Plagiasi:
 tidak terlihat

- f. Kesesuaian bidang ilmu:
 Sesuai dengan bidang yang diteliti

Semarang, 19/9 - 2019
 Reviewer 2



Drs. Sudarno, M.Si.
 NIP. 19640709 199201 1 001

Unit kerja:
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Title: Intrusion detection system in stand alone and cooperative networks

Author (s): Josephin Asha Grace and P. Kavipriya G.

Abstract: In Mobile Ad-hoc Networks (MANETs) the presence of malevolent hubs leads to a serious security problem, such hubs disturb the routing process. Due to the occurrence of malicious hub the researchers conducted different detection scheme. In this paper, we survey the existing solutions and the techniques used by the researchers to detect the malicious hub by grey hole, black hole attack and cooperative bait detection scheme and we implemented an algorithm to improve the system performance. Avoiding and sensing malicious hubs launching grey hole and collaborative black hole attack is a main challenge. To resolve this issue by cooperative bait detection scheme (CBDS) which coordinates the upside of both reactive and proactive defense architecture. The proposed system is used to avoid this issue by using Localizability Aided Localization (LAL) algorithm. The proposed work is simulated using NS-2 and is analyzed using certain parameters such as delay, throughput, loss rate, energy consumption and non-localizable.

[Full Text](#)

Title: A novel approach to detect bone cancer using k-means clustering algorithm and edge detection method

Author (s): Sinthia P. and K. Sujatha

Abstract: Medical Image Processing is one of the most challenging topics in research areas. This paper proposes an approach to detect bone tumor in MRI images. A proposed approach integrates some pre-processing techniques such as the average filter and the bilateral filter in order to remove noise and to smooth images. This will increase the quality of the image so that they are suitable for segmentation as well as morphological operations that will be used to eliminate false segments. The MRI bone cancer images are analyzed to detect the presence of bone cancer and also to determine its stage based on the computations of mean intensity and tumor size using k-means algorithm. The exploratory results demonstrate, the proposed system could get the smooth picture with edge demonstrating the ailment influenced part without the spatial and spectral noises.

[Full Text](#)

Title: A study on fatigue properties of compacts obtained from ready-made and polymer grafted alumina

Author (s): Riyadh B. Mohammad Hadi S. Al-Lami and Muhammed A. M.

Abstract: This study was devoted to outlining the fatigue behavior of alumina as a widely used ceramic material and to predict their life under cyclic loads. Two types of α -alumina have been studied to predict their fatigue behavior and the effects of physical properties, particularly, and porosity and their pore size; and mechanical properties such as fracture strength, modulus of elasticity, and toughness of materials; in addition to pressing loads. The first type was alumina made especially for pressing. The second type of alumina was commercial high purity grafted with random copolymer (n-butyl metacrylate-methacrylic acid) as a lubricant. Dry pressing forming technique with different loads has been used to form different alumina compacts. They were fired in two stages, 1200°C and 1600°C. It was found that porosity affects fatigue behavior in a complicated manner. Firstly, it weakens the ceramic material. Secondly, pore sizes, particularly surface pores, have a great harmful influence on fatigue life. Therefore, reduction in porosity and good surface finishing can elongate the fatigue life. Furthermore, it was predicted that specimens of alumina made especially for pressing, which was pressed under relatively low loads (0.5, 1, 2 kN) were relatively better than those pressed under higher loads. That is due to the initiation of fractures in the specimens, pressed under higher loads with worst case for specimens, pressed under 9kN, on the contrary of their static mechanical behavior. Gradual enhancement of fatigue properties for specimens, pressed under higher loads (11-16 kN) because of toughening mechanisms, which emerges due to the more closeness, higher internal friction, and meandrous paths of cracks. Whereas grafted alumina is better in static mechanical properties, and their fatigue properties are close to, or even better than their predecessors. Design and applications of ceramics should be based upon KTH.

[Full Text](#)

Title: Experimental analysis of Malayalam POS tagger using EPIC framework in scala

Author (s): Sachin Kumar S., M. Anand Kumar and K. P. Soman

Abstract: In Natural Language Processing (NLP), one of the well studied problem under constant exploration is part-of-speech tagging or POS tagging or grammatical tagging. The task is to assign labels or syntactic categories such as noun, verb, adjective, adverb, preposition etc to the words in a sentence or in an un-annotated corpus. This paper presents a simple machine learning based experimental study for POS tagging using a new structured prediction framework known as EPIC, developed in scala programming language. This paper is first of its kind to perform POS tagging in Indian Language using EPIC framework. In this framework, the used corpus contains labeled Malayalam sentences in domains like health, tourism and general (news, stories). The EPIC framework uses conditional random field (CRF) for building tagged models. The framework provides several parameters to adjust and arrive at improved accuracy and thereby a

better POS tagger model. The overall accuracy were calculated separately for each domains and obtained a maximum accuracy of 85.48%, 85.39%, and 87.35% for small tagged data in health, tourism and general domain.

[Full Text](#)

Title: A review on highly birefringent dispersion compensation Photonic Crystal Fiber

Author (s): Arun Joy Skaria and Revathi S.

Abstract: This paper discusses several optimum designs for high birefringence and dispersion compensation in Photonic Crystal Fiber (PCF) for broadband compensation covering the E, S, C, L bands wavelength ranging from (1360 to 1640 nm). The finite element method (FEM) with perfectly matched layer (PML) is generally used to investigate the guiding property. Large negative dispersion over wideband range is obtained in many modified structures with varying dispersion coefficient and with relative dispersion slope (RDS) matched to that of single mode fiber (SMF) of about 0.0036 nm⁻¹ at 1550nm. High birefringence of order 10²^(⁻²) is observed in most cases with asymmetric structures. In addition to this other properties of PCF like effective area, non-linearity, residual dispersion, and confinement loss are also reported and discussed.

[Full Text](#)

Title: Optimized blurred object tracking using ANFIS

Author (s): S. Rajaprabha and M. Sugadev

Abstract: Many promising applications need to track the blurred images in the videos. In most of the object trackers, implicit assumptions are made that the video is blur free. But in real time videos, motion blur is very common. If severe blur is present in a video the performance of the generic object trackers may go down significantly. The proposed method uses GLCM algorithm for feature extractions from the blurred object and then ANFIS (Adaptive Neuro Fuzzy Inference System) for tracking those blurred objects in the videos. The ANFIS model is trained with the parameters of blurred objects. The input video is imported and GLCM (Gray-Level Co occurrence Matrix) method is used to extract features from the frame. Now the ANFIS data is loaded and compared with the frame. Then the blurred object is detected and tracked by the ANFIS model. The proposed algorithm robustly track challenging scenes and severely blurred videos. The speed and performance is improved in this proposed method.

[Full Text](#)

Title: Effect of compaction density and moisture content level on shear strength behaviour of fly ash mixed coal mine overburden dump material

Author (s): Pankaj Kumar Dewangan, Manoj Pradhan and G. D. Ramtekkar

Abstract: Mixing and compaction of fly ash with the coal mine overburden dump material in presence of water result in complex shear strength behaviour of the mixture. Both fly ash and overburden dump material are cohesion less and non plastic material. But when they are mixed in presence of water and consolidate for some time, it hardens and changes the shear strength behaviour of the mixture. In this study, a series of small and large scale direct shear tests were conducted to assess the effect of mixing fly ash in two ratios i.e. 20 and 25% by volume on the shear strength behaviour of coal mine overburden dump material. With the addition of fly ash, the cohesion of the overburden dump material increased significantly while reduction in friction angle of the dump material was noticed. The reduction in friction angle got more pronounced with the increase in fly ash percentage. The effect of compaction density and moisture content levels on shear strength behaviour was also evaluated. Both cohesion and angle of internal friction was found to be decreased for the mixture compacted at lesser density. The overall mobilized shear strength was found slightly increased for the mixtures compacted at the moisture content below the optimum moisture content (OMC) due to increase in its friction angle component.

[Full Text](#)

Title: Performance analysis of hardware implemented DNA algorithm for security applications

Author (s): A. Ruhan Bevi, Kathan Patel and S. Malarvizhi

Abstract: DNA Cryptography is used for secure end to end communication over a network by encrypting the messages. DNA is a well-known information carrier from one generation to another. DNA cryptography is preferred due to vast parallelism and information density that are inherent in any DNA molecule. In this paper, a new algorithm is proposed based on DNA cryptography which enhances the security aspects of the data which is sent over a network. This is achieved by introducing feistel inspired structure and adding complex operations to it. Furthermore, this paper discusses DNA cryptosystem concepts based on the classic Vigenere cipher for substitution. A random function is used for generating One Time Password which is unique for every transaction. This makes the algorithm complex and prevents the attackers to perform any brute force attacks. The results indicates that the confidentiality and integrity of the data is maintained and the feistel inspired structure for DNA cryptography using one time pad for key generation achieves a better encryption rate.

[Full Text](#)

Title: The influence aluminum waste addition on density and compressive strength mortar

Author (s): Abdul Haris

Abstract: The function of the aluminum waste used in this study is as a developer because when mixed with a mixture of mortar aluminum powder will react with the calcium hydroxide (Ca OH 2) contained in the non-active cement or lime with water and form hydrogen. The hydrogen gas expands and tucks volume for mortar mix until doubled and also speed up the dough ingredients. This research was conducted with the aim, aluminum waste utilization in the manufacture of mortar. Variations in the mix is 0 % , 0.25 % , 0.5 % , 0.75 % and 1 % by weight of the binder to use , test objects cube is 5cm x 5cm x 5cm 150 pieces . The analysis showed that more and more, a mixture of aluminum powder, the more light, density mortar, with a minimum yield mortar autoclave 1612.8 kg / m³ and results minimum specific gravity, of the mortar, without autoclave 1636.8 kg / m³. For compressive strength, the increasing variation of aluminum powder mixture, the smaller the value of compressive strength. Where the results optimum compressive strength of mortar with autoclave 13.886 N/mm² and a minimum compressive strength of 6.436 N/mm². While the results of optimum compressive strength of mortar without autoclave 13.65 N / mm² and a minimum compressive strength of 6.124 N / mm². From this analysis it can be concluded that the mortar with autoclave treatment has a specific gravity that is smaller but has a great compressive strength.

[Full Text](#)

| | |
|--------------------|---|
| Title: | A rule based approach for ensuring privacy in data mining |
| Author (s): | G. Manikandan, N. Sairam, M. Sathya Priya, Sri Radha Madhuri V. Harish and Nooka Saikumar |
| Abstract: | Data mining or the knowledge discovery process is examining data in several views and sum up it into practicable data that can be utilized to raise gross, cuts costs, or both. The ultimate goal of data mining is to attain the patterns and the trends that are concealed in the stimulant data. For this purpose it utilizes the large data sets that are available as part of data publishing. Data Privacy has to be ensured while extracting information from large data sets. In recent times achieving privacy in data mining plays a vital role. Data Perturbation can be used for generating the sanitized data from the original data. Most of the existing systems in the literature use a single noise value for the perturbation process. Here we are adding noise by generating If-then-rules for various attributes by grouping them into various classes for attaining privacy. |
| | Full Text |
| Title: | Effect of part features on dimensional accuracy of FDM model |
| Author (s): | Mohd Nizam Sudin, Shamsul Anuar Shamsudin and Mohd Azman Abdullah |
| Abstract: | This research investigates the dimensional accuracy of parts produced using the additive manufacturing method of Fused Deposition Modeling (FDM). The fabrication of parts was carried out based on the standard value of process parameter of Stratasys FDM 400MC machine. Parts with four common features of products in different sizes were fabricated in FDM machines using Acrylonitrile Butadiene Styrene (ABS) material. Then, the linear dimension of each part feature was measured with a Coordinate Measurement Machine (CMM) that was repeated for three times. The accuracy of the fabricated part feature was computed by subtracting the nominal dimension of the part (CAD model) with the measured dimension of FDM model. An analysis of sixteen different dimensions of the part feature were identified that, parts dimension had a significant effect on the dimensional accuracy of FDM model. In addition, it was found that FDM machine is less accurate in producing a circular shape part such as cylinder, sphere and hole as the majority of them are out of the machine's tolerance. |
| | Full Text |
| Title: | Comparison of efficiency to the air pollution control systems from the solid waste incineration |
| Author (s): | Prayong Keeratiurai |
| Abstract: | The solid wastes rapidly increasing to the problem of storage, transportation, disposal and environmental impact. Removal of solid wastes by burning was a popular way in municipal sub districts. Because of it was convenient and highly effective in the solid waste minimization. This research studied to reduce air pollution from the solid waste incineration. This study used tools for trapping dust, smoke and air pollutant. This study conducted for the solid waste incineration was four systems. The first system was the solid waste incineration that did not turn on the air pollution control system. The second system was the air pollution control with the smoke burning alone. The third system was the air pollution control with the wet scrubber alone. The air pollutants were treated with water. The fourth system was the air pollution control with the smoke burning and the wet scrubber. This study was conducted the solid waste incineration that was 1, 2, 3, 4 and 5 kg in every system. The objectives of this research were the evaluation of relationship between the internal temperatures in incinerator to time at various waste quantities and the performance evaluation of the air pollution control systems. The results of this study found that the solid waste incineration in the first system which this system was used in the comparison, had a lot of smoke and soot and black smoke. The efficiency of the solid waste incineration of this system was $90.44\% \pm 4.58\%$. The air pollution control with the smoke burning alone found that the smoke and soot from the solid waste incineration were decreased than in the first system. This second system had the efficiency of the solid waste incineration was $90.04\% \pm 4.84\%$ and the efficiency of the air pollution control system was $12.90\% \pm 5.69\%$. The results of this study also showed the air pollution control system with the wet scrubber alone. They found that the smoke and soot from the solid waste incineration were decreased more than in the first and second system because the water was sprayed to eliminate air pollutants. The internal temperatures in incinerator were higher than the first and second system. This third system had the efficiency of the solid waste incineration was $89.53\% \pm 4.91\%$ and the efficiency of the air pollution control system was $40.75\% \pm 3.97\%$. The last system was the air pollution control with the smoke burning and the wet scrubber. The results of this study showed that this system could control air pollution more than all the systems that were tested. This fourth system had the highest efficiency of the solid waste incineration and the air pollution control system were $92.50\% \pm 3.57\%$ and $52.31\% \pm 7.02\%$, respectively. |
| | Full Text |
| Title: | Modeling of air pollutants SO2 elements using Geographically Weighted Regression (GWR), Geographically Temporal Weighted Regression (GTWR) and Mixed Geographically Temporal Weighted Regression (MGTWR) |
| Author (s): | Kukuh Winarso and Hasbi Yasin |
| Abstract: | Sulfur dioxide gas (SO2) is derived from the combustion of fuels containing sulfur. Aside from fuel, sulfur is also contained in the lubricant. Sulfur dioxide gas is difficult to detect because it is colorless gas. Sulfur dioxide can cause respiratory disorders, indigestion, headache, chest pain, and nerve. A necessary preventive measures to reduce the impact of air pollutants SO2 particular elements, one of them by making the modeling that can bring the causes and factors resistor element of air pollutants SO2. The modeling is Geographically Weighted Regression (GWR), Temporal Geographically Weighted Regression (GTWR) and Mixed Geographically Weighted Temporal Regression (MGTWR). All three models are regression models spatial, temporal and spatial temporal spsial- combined, which models the effects of air pollutants SO2 element with a direct view of geography and time of occurrence of air pollution. The third model is then compared to obtain the best model in the modeling of air pollutants SO2 elements. |
| | Full Text |
| Title: | Cost of construction: how globalization impacts on vernacular houses |
| Author (s): | Mehdi Ghafouri, Tareef Hayat Khan and Abdullah Sani bin Ahmad |
| Abstract: | Historically people in vernacular area did not have to pay to become a householder or a landowner, or even to buy materials. But that is not the case in modern era any more. Besides the fact that one has to buy land or house, modern materials and technology, spread out by the flow of globalization, has also been associated with increasing cost. In this study on vernacular houses in Northern Iran, both traditional (Kali, Lar deh ee, Muddy), and modern (load bearing brick wall, concrete structure and steel structure) have been investigated with regards to their cost. Residents, experts and contractors were used to collect the data. Findings showed that the perception of cost is a skewed one, and choosing a new material or technique over an old one needs to be rational. |
| | Full Text |
| Title: | An improved model for load balancing and dynamic channel allocation in cluster based MANETs |

Author (s): K. Shahina and Y. Bevish Jinila

Abstract: In Mobile ad-hoc networks (MANETs), mobile devices are arranged independently for the use of wireless links and progressively fluctuating system topology. In MANETs, the interconnections are dynamically changing in an increasing rate due to fluctuating non-uniform loads which leads to network congestion and data losses. To handle such interconnections, the channel allocating scheme must be done in such a way to support dynamic allocation mechanism and Cooperative load balancing to handle the heavy load in MANETs. Dynamic channel allocation scheme proves more advantageous over all other channel allocation schemes because it controls network traffic effectively, avoids data loss and is energy efficient. This technique also has some problems like intervention and incompetence under heavy load. In this paper Spectrum sensing mechanism is analyzed as a suitable solution for this problem, which senses the free channels and reduces the network interference. Cooperative load balancing control is associated with controlling incoming traffic in a telecommunication network and is extensively used to avoid congestive crumple or link capability of the intermediate nodes and networks and to reduce the rate of sending packet. Through extensive simulations, we illustrate that both dynamic channel allocation – time reservation using adaptive control for energy efficiency and cooperative load balancing get better bandwidth efficiency under non-uniform load distributions compared to other protocols that do not use these mechanisms. Simulation results prove that DCA-TRACE provides noteworthy improvement for both uniform and non-uniform traffic heaps.

[Full Text](#)

Title: Investigation of surface water quality in Owerri Municipal, Imo State, Nigeria for human consumption

Author (s): B. C. Okoro, R. A. Uzoukwu and C. K. Ademe

Abstract: The study was around Owerri Municipal of Imo State, Nigeria to investigate the quality of the surface water for human consumption. The qualities of water from Otamiri River and Nworie River as sources of potable water supply in Owerri Municipal were evaluated by analyzing samples of raw water collected from Otamiri River and Nworie River which were compared with World Health Organization (WHO) Standards. Water analyses were carried out on the samples for their physicochemical parameters which included, major ions, nutrients and their bacteriological quality. The average values obtained from the analyses are: Ammonia (mg/L) = 0.65, Total iron (Fe) (mg/L) = 0.40, pH = 7.57, Sodium (Na) (mg/L) = 0.95, Nitrate (mg/L) = 0.96, Nitrate (mg/L) = 1.30. The average observed values were compared with standard values of the WHO for potable water. Based on WHO guidelines for drinking water, the results of the analyses indicated that the waters from Otamiri River and Nworie River are not acceptable for human consumption. The two surface waters are unsafe for drinking and they require appropriate treatment before human consumption. Recommendations were made to discourage direct consumption of waters from Otamiri and Nworie Rivers surrounding Owerri Municipal.

[Full Text](#)

Title: Face recognition based attendance management system with raspberry pi 2 using Eigen faces algorithm

Author (s): Sarath chandu gaddam and N. V. K. Ramesh

Abstract: In recent trends industries, organizations and many companies are using personal identification strategies like finger print identification, RFID for tracking attendance and etc. Among of all these personal identification strategies face recognition is most natural, less time taken and high efficient one. It's has several applications in attendance management systems and security systems. The main strategy involve in this paper is taking attendance in organizations, industries and etc. using face detection and recognition technology. A time period is settled for taking the attendance and after completion of time period attendance will directly stores into storage device mechanically without any human intervention. A message will send to absent student parent mobile using GSM technology. This attendance will be uploaded into web server using Ethernet. This raspberry pi 2 module is used in this system to achieve high speed of operation. Camera is interfaced to one USB port of raspberry pi 2. Eigen faces algorithm is used for face detection and recognition technology. Eigen faces algorithm is less time taken and high effective than other algorithms like viola-jones algorithm etc. the attendance will directly stores in storage device like pen drive that is connected to one of the USB port of raspberry pi 2. This system is most effective, easy and less time taken for tracking attendance in organizations with period wise without any human intervention.

[Full Text](#)

Title: Identification tool of rupiah banknotes for blind people with audio output using optical character recognition (OCR) method

Author (s): Albert Gunadhi, Daniel Ivan, Diana Lestariningsih, Widya Andyardja, Yuliati

Abstract: Visually handicapped person apparently can't learn through some physical experiences or observations that required sight, in that case they have to get the information by direct access of another sensory perceptions such as touch or hear. Even in their financial management, visually handicapped persons are rely on somebody who has a normal vision whom they really trusted to organize their money. Therefore the writer brought up an idea to make a device whose its function is to identify a value of a money with audio output. It is expected that help visually handicapped person when have a transaction using cash effectively, quicker and also to avoid miscalculation. To identify a value of a money, the writer using numerical character as parameter. This device using image processing and optical character recognition as the method and also uses some of the important components such as windows tablet and webcam. Before it could recognize anything, the image have to have image pre-processing and some of segmentation to continue in the training character. After training character has done, next it will be continue with recognition process. When a character has been recognized, there will be a loop audio that mention a value of a money.

[Full Text](#)

Title: Towards the adoption of modular construction and prefabrication in the construction environment: A case study in Malaysia

Author (s): Muhamad Faiz Musa, Mohd Reeza Yusof, Mohammad Fadhil Mohammad and Noor Sahidah Samsudin

Abstract: Modular construction is classified as off-site prefabrication and modern method of construction and used in developed countries such as US, UK, Japan, European countries and Australia due to its benefits. Modular construction is also known as volumetric construction, modular building system or modular system. Modular construction was developed since the 1940's, during the World War 2 as a solution for the soldier's accommodation and after World War 2 due to the increase in housing demand in the US. Modular construction is a construction method to construct a building using three-dimensional or modular units, which are assembled and produced in a factory. The three-dimensional units used for modular construction includes the logistic and assembly aspect of it, done in proper coordination through planning and integration. The research aims to investigate the definition, history, benefits, application and characteristics of modular construction and the adoption of modular construction in the Malaysian construction industry through a case study.

[Full Text](#)

| | |
|--------------------|---|
| Title: | Degradation of organic, iron, color and turbidity from peat water |
| Author (s): | Mirna Apriani, Ali Masduqi and Wahyono Hadi |
| Abstract: | This paper evaluates the Fenton process, involving oxidation and settling after coagulation and flocculation for the removal of organic, iron, color and turbidity from peat water. The experiment is to examine the operation condition which can result in the highest removal efficiency. The experimental variables studied include oxidation time, molar ratio of $[H_2O_2]/[Fe^{2+}]$, coagulation and flocculation pHs and settling time. The highest removal efficiency is resulted from operation condition of 60 minute oxidation and the coagulation pH of 8. The organic removal efficiency is around 33.40% to 46.86% for oxidation and 53% to 79.66% for settling. The highest removal of 37.92 mg/L organic is resulted from the $[H_2O_2]/[Fe^{2+}]$ molar ratio of 4.5. For organic concentration of 26.65 mg/L, the highest removal is resulted from the $[H_2O_2]/[Fe^{2+}]$ molar ratio of 3.5. The removal efficiency of iron, color and turbidity by settling process is 99% for all of the $[H_2O_2]/[Fe^{2+}]$ molar ratio. In oxidation process, the removal efficiencies of iron, color and turbidity are 2% to 4%, 20% to 57%, and 17% to 42% respectively. The experiment results also show that the maximum effect of removing pollutant is occurring on settling process after coagulation and flocculation. |
| | Full Text |
| Title: | Effective matrix block sizes in percolation model and filtrational parameters of fractured environments |
| Author (s): | Marat Ovchinnikov and Galiya Kushtanova |
| Abstract: | The relationship of matrix block sizes and fluid filtration parameters in fractured porous media is considered. It is shown that the Bareblatt hypothesis operates quite well starting from the times smaller than the characteristic times of pressure redistribution in saturated porous media and relaxation times in fractures media with two type of porosity. By using of percolation model of a naturally fractured reservoir with uniform and normal distributions of matrix block sizes it is calculated linear lengths of the blocks. It is occurred that the relatively large linear sizes of the blocks in fractured porous media (10-1-101 meters) corresponds to the relaxation times in interval 102-105 seconds. |
| | Full Text |
| Title: | Use of spectral decomposition attribute in detecting channels in Taranaki basin, New Zealand |
| Author (s): | Joseph Gnappagasan and Umar Bin Hamzah |
| Abstract: | Alluvial deposit is considered to be one of the biggest hosts of the petroleum entrapment and also for many nonrenewable resources. Several methods have been introduced to track and delineate the alluvial deposits that show geological features of channels, point bars, flood plains, and crevasse play and so on. The purpose of this paper is to discuss on how spectral decomposition method could be used to enhance geological features of the Taranaki basin emphasizing on stacking channels that widely seen most part of the area. With the introduction of complex traces in early 1970, more seismic attributes have been created and used by seismic interpreters to get better results in interpreting the subtle features of the subsurface. One of the attribute that widely used nowadays is spectral decomposition which was created simply by changing the time seismic into frequency domain using Fourier analysis that cross correlate between predefined sinus and cosines frequencies. Each channel in the survey area stand up more clearly within a specific frequency range where thicker channels shows higher amplitude reading at lower frequency and the thinner layer shows higher amplitude reading at higher frequency. Application of spectral decomposition also helps in determining the channels which were deposited within the incised valleys and helps in recognizing the orientation as well the relative thickness of each channel. |
| | Full Text |
| Title: | Double-contour geodesic domes with an internal second contour |
| Author (s): | Lakhov A. Ya. |
| Abstract: | The new type of a double-contour geodesic dome with a plate space enclosing contour and a lattice internal load bearing contour is described. Here the article contains description of a principle of a duality for geodesic networks, questions of breakdown of domes of plain hexagonal elements and of mainly plain hexagonal elements. New reusable parametrical objects on embedded programming language within ArchiCAD software GDL are described too. |
| | Full Text |
| Title: | Combination up flow roughing filter in series with geotextile to removal total nitrate in dry and rainy season |
| Author (s): | Maritha Nilam Kusuma, Orta Oktavia, Nurina Fitriani and Wahyono Hadi |
| Abstract: | Water treatment plants Siwalanpanji treating raw water by ultra filtration without pre treatment. In dry and rainy season, turbidity reach ± 100 and ± 2500 NTU. Influent of ultra filtration allowed is = 100 NT; it is necessary pretreatment with principle of filtration and sedimentation. Roughing filter is chosen because have that function. Type roughing filter (RF) used is up flow roughing filter in series (UFRS). Media filter use gravel with a various diameter. In the compartment I = (10-15) mm; Compartment II = (16-20) mm; Compartment III = (21-25) mm; Compartment IV = (26-30) mm; Compartment V = (31-35) mm; Compartment VI = (36-40) mm. Analyzed nitrate with US EPA METHOD 353.2 Revision 2.0 August 1993. UFRS installed in series with six compartments with additional geotextile. Geotextile aimed to helping filtration on UFRS. This research aims to remove total nitrate in the raw water at rainy and dry seasons. UFRS with geotextile able to remove total nitrate in the dry season and the rainy season for respectively 72, 6 % and 44, 2%. |
| | Full Text |
| Title: | Analysis desiccant addition to the quality of SF6 gas compartment for gas insulated switchgear 150kV |
| Author (s): | Titiek Suheta |
| Abstract: | In the electrical equipment with SF6 insulating gas, SF6 gas quality according to standard, is fundamental, for good insulating power, when a decline in the quality of the gas will decrease, the level of voltage insulation on electrical equipment. In this case, it was found that the aggravation of , SF6 gas in GIS Compartment Brand Ganz in the substation Darmogrande the high rate of humidity gas SF6 insulation to exceed the standard limit which is determined. In addition, GIS is not equipped with a silica gel / desiccant as, moisture absorbent material, and absorbent gas the result of switching PMT (IEEE Std 1125-1993), which resulted in a decrease in SF6 gas quality. The addition of desiccant in the GIS is needed to maintain the quality of SF6 gas. This material will be analyzed quantity and performance when applied inside the compartment so that the deterioration of the quality of SF6 gas and insulation failure can be avoided as early as possible, and SF6 retain their character with BDV of 88.4 kV /cm (according to the Critical Breakdown Voltage SF6). Hopefully, SF6 gas work according to its function as a medium of good insulation. As an application it has been done desiccant experiment on compartment GIS in the substation Darmogrande. |

Title: A statistical analysis on price elasticity of electricity demand using Response Surface Methodology

Author (s): Abdullah Asuhami Mohd Zin, Mehdi Moradi and Azhar Bin Khairuddin

Abstract: For strategic planning under restructured environments, it is essential to assess how consumers respond to the price changes in order to increase the profits of suppliers and customers. In this study, a case study based on Iran power system was collected to explore the effect of different factors including proportion of income spent-level (A), consumer academic-level (B), demand-types (C), demand time (D), possibility of postponing demand-level (E), price-level (F), demand-level (G) and awareness of participation benefits-level (H) on price elasticity of electricity demand. To achieve this, an nonlinear-empirical model based on Response Surface Methodology (RSM) is created. The statistical analysis reveals that factor A which represents proportion of income spent-level has the most significant effect on determination of the price elasticity of electricity demand while consumer academic-level (B) factor has the least effect. The results can be utilized as a tool for policy makers in developing an effective electricity pricing schemes.

[Full Text](#)

Title: Designed a new compensation current control method for three-phase grid-connected photovoltaic inverter

Author (s): A. Asuhami Mohd Zin, A. Naderipour, M. H. Bin Habibuddin, A. Khajezadeh and A.H. Khavari

Abstract: This article proposes a New Compensation Current Control Method for Three-Phase Grid-Connected Photovoltaic Inverter. Our proposed grid-connected power converter consists of a switch mode DC-DC boost converter and an H-bridge inverter. The control method designed to eliminate main harmonics and also is responsible for the injection power to the grid. The proposed control method is comprised of the advance synchronous reference frame method (ASRF). The simulations for three-phase Bridge type inverter have been done in MATLAB/Simulink. To validate the simulation results, a scaled prototype model of the proposed inverter has been built and tested.

[Full Text](#)

Title: Analysis of a peak detection algorithm using system -on-chip architecture

Author (s): Lim Chun Keat, Asral Bahari Jambek and Uda Hashim

Abstract: Peak detection is widely used in many signal-processing applications, since it allows automatic signal processing and produces faster result for users. In this work, an analysis of a peak detection algorithm implemented into a field-programmable gate array (FPGA) is discussed. A system-on-chip (SoC) hardware architecture was designed using the Altera platform to analyze the system data flow. A set of 1000 random data was executed by the peak detection algorithm in the SoC architecture. The output result obtained from the architecture were verified with the result obtained from a Matlab simulation. Based on the power consumption report, the reported power dissipation of the system architecture is 202.79 MW.

[Full Text](#)

Title: Analysis of brain regions and event related potential (ERP) associated with the imagination of actions by EEG signals and brain-computer interface (BCI)

Author (s): Diego Alfonso Rojas, Leonardo Andres Gongora and Olga Lucia Ramos

Abstract: Brain-computer interfaces (BCI) are devices designed with the aim of enable ways of interaction and communication in people with disabilities, and improve the execution of different tasks in healthy individuals. Thus arises the concept of imagined action, which consists of using different techniques of measuring and processing, capable of registering, extract and classify features related to changes that take place in the cerebral cortex, specifically the motor cortex, at the time of thinking about a movement or action. This work presents the results of analyzing EEG signals from the thought of an action, specifically to push an object, using domain transformation techniques, as well as a methodology that facilitated the registration of the mentioned event, obtaining as main contribution the characterization of areas with greater activation and variation of potential at the time to imagine the movement.

[Full Text](#)

Title: Identification and quantification of Malathion using image analysis algorithms in infrared spectrometry

Author (s): Cristian Camilo Ortiz Yara, Olga Lucia Ramos Sandoval and Dario Amaya Hurtado

Abstract: The infrared spectroscopy (IR) is a chemical analysis method cheaper and faster. Reason why it is important to deepen its application in the quantification of pesticides in food, especially for the detection of harmful amounts for human health. Using Matlab® tool, an algorithm capable of analyzing images of IR spectra was developed for transmittance and absorbance, without the need of using a calibration curve, as was commonly used, in order to identify and determine the amount of Malathion in a matrix. The algorithm calculates the area under the curve at intervals of 620-715 cm⁻¹, 1018-1047 cm⁻¹, 1200-1300 cm⁻¹ and 1700-1800 cm⁻¹, for C-S, P-O, C-O and C = O bonds respectively, from the absorbance spectrum. Once the problems of the matrix effect, the molecular dynamics and the information obtained on the image analysis, have been considered. The direct influence of the number of times that the bond repeats and the IR spectrum were achieved. A mathematical relationship was developed, which was capable to find the amount of analyte in a sample. Finally, the algorithm evaluation was developed, having two IR spectra of Malathion, the first reported in the data base SDBS and the second from a commercial sample at 57% w/v. It was obtained an error of 4.62% and 11,76% respectively.

[Full Text](#)

Title: Blind source separation on biomedical field by using nonnegative matrix factorization

Author (s): T. C. Chuan, A. M. Darsono, M. S. Md Saat, A. A. M. Isa and N. M. Z. Hashim

Abstract: The study of separating heart from lung sound has been investigated and researched for years. However, a novel approach based on nonnegative matrix factorization (NMF) as a skill of blind source separation (BSS) that utilized in biomedical field is fresh presented. Lung sound gives beneficial information regarding lung status through respiratory analysis. However, interrupt of heart sound is the obstacle from taking precise and exact information during respiratory analysis. Thus, separation heart sound from lung sound is a way to overcome this issue in order to determine the accuracy of respiratory analysis. This paper proposes factorizations approach that concern on the 2 dimensional which is combination of frequency domain and time domain or well known as NMF2D. The proposed method is developed under the divergence of Least Square Error and Kullback-Leibler and it demonstrates from a single channel source. In this paper, we will forms a multivariate data and it will proceed for dimension reduction by log frequency domain.

Experimental tests and comparisons will be made via different divergence to verify and evaluate efficiency of the proposed method in term performance measurement.

[Full Text](#)

Title: Enhancement of leakage resiliency based secure data transmission using Key Distribution Scheme shuffling algorithm

Author (s): Rincy S. Cherian and A. Veeramuthu

Abstract: Side Channel Assaults (SCA) works on the information that leaked during the transmission. Sometimes unintentional outputs may leak the information to discover the secret information of the cryptographic modules. This paper tried to focus on the generic framework of lightweight key shuffling scheme to restrict the secret privileges. The Key Distribution Center (KDC) establishes the key "K" that is shared between the source and destination. Based on the message sent time and number of hops, the encryption and decryption process is built. Experimental results show that our proposed algorithm works better as far as throughput. We trusted that this algorithm is an efficient solution for detecting the side channel attacks. Blowfish Algorithm has been implemented and utilized in order to enhance the efficiency. The calculation comprises of two sections: a key-extension part and an information encryption part. Each round comprises of a key dependent stage, and a key-and information subordinate substitution. The main extra operations are four ordered exhibit information lookups per round. Blowfish utilizes an expansive number of sub keys. These keys must be pre computed before any information encryption or unscrambling. Creating the sub keys is ascertained utilizing the Blowfish calculation. Applications can store the sub keys as opposed to execute this determination prepare numerous times.

[Full Text](#)

Title: An efficient power control detection scheme for MIMO transmission in LTE

Author (s): Vanitha Rani Rentapalli, Sowjanya B. and B. T. P. Madhav

Abstract: In this paper author's proposed an efficient ordering scheme for interference cancellation, which is determined for multiple antenna systems using transmission power control. Based on this approach, the fixed ordering algorithm is first designed, for which the geometric mean is used for channel gain coverage. Simulation results shows that proposed ordering schemes using QR-decomposition require a reduced computational complexity results with improved error performance. In this article an overview of power control in LTE uplink MIMO schemes including receivers suitable for uplink MIMO are also presented, and their link performances are compared.

[Full Text](#)

Title: Optimization of dynamic channel allocation techniques in mobile wireless sensor network

Author (s): Vivita Sherin B. and Sugadev M.

Abstract: Wireless network needs an access mechanism and communication services during the mobility of the nodes. A Mobile Ad hoc network is a type of Wireless network services which is provided when infrastructure is not available or in an impractical or expensive environment like Emergency rescue operation , military application, home networking. In ad hoc network host (mobile node) movement is frequent, topology changes are frequent, where there is no fixed cellular infrastructure for a multi hop network and data must be routed via intermediate nodes. Ad hoc network is used for setting up of fixed access point as the backbone infrastructure is not viable i.e. impractical or destroyed and with increased users daily in turn increases the significance of bandwidth efficiency by maintaining the tight requirement on energy consumption and delay. An Ad hoc On-Demand Distance Vector (AODV) Routing is a routing protocol used in these mobile ad hoc networks (MANETs) which provides on demand services by providing the dynamic channel allocation. A novel algorithm for the optimization of the dynamic channel allocation is provided for a CBR (cluster based routing) called "Mobile cluster based relay reconfiguration (MCRR)" Where the cluster head is chosen considering the energy of the all nodes in the cluster .This approach is used for increasing the performance by optimization in terms of throughput, energy consumption, packet loss and bandwidth for mobility mobile nodes. This paper the existing approaches are compared to the optimized algorithm MCRR through the simulation using the RED HAT software.

[Full Text](#)

Title: Vlsi design for a PSO-optimized Real-Time Fault-Tolerant task allocation algorithm in wireless sensor network

Author (s): Priyanka M., Anisha S. and Sakthi Prabha R.

Abstract: The most complicated issues in a wireless sensor network are to distribute a task uniformly among the nodes of the sensor network. Rational distribution of sensing tasks would improve the lifetime of the sensor network and would even reduce the overall power consumption and the task will be executed within the given deadline. In this paper, we introduce a PSO-optimized Real-time fault tolerant algorithm (FTAOA) for WSN's designed in VLSI to overcome the existing drawbacks. A P/B technique is adopted to overcome the faults in the sensor network and distribute the provided task rationally. The Discrete particle swarm optimization (DPSO) is constructed using the Binary matrix encoding form, which reduces the task execution time and saves the node energy by balancing the load on the sensor nodes. This can be achieved by developing an expression for Fitness function; this can even improve the scheduling effectiveness and system reliability. Primarily, FTAOA employs the P/B technique which uses passive backup copies overlapping methodology to monitor the mode of backup copies adaptively through scheduling primary copies early and backup copies delayed. The resources are well utilized, as tasks are allocated with high performance in terms of energy consumption, load and failure ration. The potency and efficacy of Fault tolerant mechanism can be examined through the final results.

[Full Text](#)

Title: Registration-analytical provision of productive expenditures management of commercial organizations in agro-industrial complex

Author (s): Anna S. Gorbacheva, Tatiana A. Chekrygina, Nadezhda V. Chernovanova, E. V. Golubeva and L. N. Pavlova

Abstract: The authors offer and substantiate the hypothesis that one of the reasons for low level of competitiveness of national commercial organizations in agro-industrial complex is ineffective registration-analytical provision of productive expenditures management. The purpose of the article is to determine key problems and to develop recommendations for improvement of registration-analytical provision of productive expenditures management of commercial organizations in agro-industrial complex. For this purpose, by the example of a large enterprise Rusagro, the authors develop and approbate the methodology of evaluation of effectiveness of registration-analytical provision of productive expenditures management of commercial organizations in agro-industrial complex. As a result of the research, the authors come to the conclusion that the most important reason for low competitiveness of national commercial organizations in agro-industrial complex of Russia are high productive expenditures which are caused by influence of climatic factors and are uncontrolled. At that, among internal factors, which can be managed, the first place belongs to ineffectiveness of registration-analytical provision of productive expenditures management, which shows large

importance of this factor. The authors determined causal connection between ineffective registration-analytical provision of productive expenditures management and low competitiveness of national commercial organizations in agro-industrial complex, found the most serious problems of registration-analytical provision of productive expenditures management of commercial organizations in agro-industrial complex which lead to its low effectiveness, and compiled recommendations for their solution.

[Full Text](#)

Title: Mathematical modeling of process parameters in Electrical Discharge Machining on 17-4 PH steel using Regression Analysis

Author (s): Chandramouli S. and Eswaraiah K.

Abstract: Proper selection of machining conditions is one of the most important aspects in the die sinking Electrical Discharge Machining process. The objective of the present work is to develop empirical models and prediction of machining quality for Electrical Discharge Machining of martensitic Precipitation Hardening (PH) stainless steel with copper tungsten electrode. The important process input parameters such as peak current, pulse on time, pulse off time and tool lift time are selected to predict the machining qualities of Material Removal Rate (MRR) and Surface Roughness (SR). Taguchi experimental design (L27 orthogonal array) was used to formulate the experimental layout. The empirical models have been developed to predict the Material Removal Rate (MRR) and Surface Roughness (SR) using Regression Analysis (RA). Prediction capability of regression models are verified with experimental data. According to results, the regression model is better performed to predict the MRR and SR for a given range of process parameters of EDM.

[Full Text](#)

Title: Secure de-cloning process with enhanced reliability along with dual Encryption

Author (s): Aparna Ananda Mohan, Arsha Mary Philip and Chandu P. M. S. S.

Abstract: The most essential fundamental in the cloud services is the de-duplication route which is used to prevent the similar copies of the stored data and prevention of data repetition. The de-duplication is executed to prevent the storage of similar kinds of content and similar file names in the cloud storage. The proposed system is having three major stages as Encryption, Auditing and De-duplication. The AES methodology is performed for the encryption process; the encryption is conducted at the service provider side, before uploading the data into the cloud. The auditor verifies the data reliability and converses within the service provider for getting the data information. The auditor is presenting the data security and integrity within privileges differential. The de-duplication process is being performed within the SHA-3 algorithm, which prevents the data duplication. This technique is preventing the file duplication by matching and comparing with the already uploaded file in cloud and removes the existing file and content initially by utilizing the SHA-3 algorithm. These are the three proposed techniques, which helps in improving the data efficiency in cloud environment and achieves the desired security process in the encrypted outsourced data base.

[Full Text](#)

Title: Attribute based encryption (ABC) algorithm for searching and securing encrypted data

Author (s): A. Vinothkumar, M. Anand and S. Ravi

Abstract: Cloud servers are virtual servers that can be run on cloud computing environmental and it encrypts data by a common key. Due to this accessing client through server is easy. In this paper, client can encrypt, store and search data by their own key on server. If client sends encrypted queries to the server for searching, it returns the encrypted matching data without knowing about plain text. In this algorithm, attribute based searching mechanism is used for searching data on cloud in which server is only allowed to learn the set of encrypted documents and attribute of the documents and not the keyword data. A user's private key is associated with a set of attributes and cipher text specifies an access policy over a defined universe of attributes within the system.

[Full Text](#)

Title: Application of an integrated QFD and Kano's model, case study: Cabinet design

Author (s): Dian Retno Sari Dewi and Dini Endah Setyo Rahaju

Abstract: QFD is a methodology that helps translating customer desires into technical specifications. Rating assessment in determining the relationship between customer need and engineering characteristics are often very subjective in QFD. QFD also assume that customer satisfaction is determined linearly with the need of customers. Yet according to the model of Kano, the increase in customer satisfaction is not linear with the need of customers. This study contributes to application the mathematical modeling to maximize customer need simultaneously in minimizing customer dissatisfaction to assign product development resources. The relationship between consumer desire and technical characteristics were obtained by regression. The model was applied to cabinet design. Results showed that the output obtained by the model can assign existing resources to improve customer satisfaction and dissatisfaction.

[Full Text](#)

Title: Preventing health care web applications from session hijack attacks using session key authentication and distributed session ID

Author (s): S. S. Manivannan and E. Sathiyamoorthy

Abstract: Usage of health care web applications by network of hospitals and health care service providers are increases in the current technology world. Accessing the confidential healthcare information by doctors, patients over the wireless network is at the risk of information theft by various attacks. Most of the multi specialty hospitals situated in metropolitan cities, chief doctors are sending the prescriptions to the junior doctors over the internet after successful completion of the surgery. Individual session is created for each user to access the health care data in a web application. Hackers make use of sniffer tools to crack the session ID and hijack the session in order to steal the confidential data of the patients. In this paper, we have proposed the session key authentication method and distributed session ID to secure the medical data against session hijack attacks in wireless networks.

[Full Text](#)

Title: Wavelet-based subsurface analysis in a non-stationary thermal wave imaging

Author (s): P. V. S. Saketh, P. Santosh Kumar, Sk. Subhani and G. V. Subbarao

Abstract: Active infrared thermography makes use of temperature contrast over the object surface generated by distorted heat

flow due to subsurface anomalies present in the material. This paper presents a wavelet transform based analysis for subsurface anomaly detection in recently introduced Quadratic frequency modulated thermal wave imaging for the subsurface analysis specimen and compares it with the contemporary Fourier transform based phase analysis using an experimentation carried over a carbon fiber reinforced plastic specimen with embedded flat bottom holes.

[Full Text](#)

Title: Pressure and pressure derivative analysis for hydraulically fractured vertical wells with face skin

Author (s): Freddy Humberto Escobar, Ruben Alberto Gonzalez, Laura Maria Hernandez and Claudia Marcela Hernandez

Abstract: Pseudo linear flow takes place in finite-conductivity fractures when the fracture face possesses a moderate to high face skin. Then, an apparent linear flow will be developed once well bore storage has decayed. If given the case, the interpreter should avoid interpreting the test using the model for an infinite-conductivity fracture. Although, the straight-line conventional analysis has been included, this paper presents a methodology that uses characteristic points and lines found on the pressure derivative plots. The formulated technique was applied to a synthetic example and successfully compared to conventional analysis.

[Full Text](#)

Title: Secured and optimal retrieval of data in Cloud through computational techniques

Author (s): Sudha B. and Jabez J.

Abstract: Within the Cloud computing system, it is essential to provide storage and security solution for users and the enterprises. It provides greater benefits like elasticity and flexibility. The Compromises of data occur due to attacks by the users. In this, we propose a secured and optimal retrieval of data in cloud through computational techniques. We ensure the security of the sensitive data through efficient fragmentation algorithm. Here, the data is fragmented and storing the fragmented pieces in multiple cloud nodes by ensuring each node stores a single fragment. It replicates and retrieves the fragmented data over the cloud space. The fragmented data are stored in a cloud node with a certain distance by means of Mersenne Twister computational technique and this prohibits the attacker to guess the location of fragmented data. It beats the assaults of finding the area of information and the bargain of hub containing the information is less. This does not depend on the cryptography procedures for security of information with the goal that it minimizes the expense of costly techniques. Furthermore, this likewise guarantees the internet getting to and altering of the record should be possible.

[Full Text](#)

Title: An efficient clustering formulation from resemblance in extant algorithms

Author (s): Mohana Prasad K., R. Sabitha and Oviya

Abstract: Mobile commerce is an emerging trend. Mobile commerce provides exciting opportunities for users to perform shopping, order food, m-payments etc. This increasing trend leads to security threats. This paper is focused on user authentication, service provider authentication and security. User authentication is performed by using finger vein based biometric methodology. Existing system used for mobile payment services in handheld devices doesn't involve biometric authentication. Hence leading to misuse and confusion among m-commerce users. Our proposed system is focused on finger vein authentication system (FVAS) for user authentication. The finger vein obtained is matched with the database using fuzzy logic system to obtain the matching score. If the matching score is above the threshold value PIN distribution process is initiated. Thus this paper looks to provide time efficient, high secure solution for m-commerce users and bring new m-commerce users to this vertical.

[Full Text](#)

Title: Efficient analysis of medical image de-noising for MRI and ultrasound images

Author (s): Mohamed Saleh Abuazoumy and Abdirahman Mohamud Shire

Abstract: Magnetic resonance imaging (MRI) and ultrasound images have been widely exploited for more truthful pathological changes as well as diagnosis. However, they suffer from a number of shortcomings and these includes: acquisition noise from the equipment, ambient noise from the environment, the presence of background tissue, other organs and anatomical influences such as body fat, and breathing motion. Therefore, noise reduction is very important, as various types of noise generated limits the effectiveness of medical image diagnosis. In this paper, an efficient analysis of MRI and ultrasound modalities was investigated. Three experiments were carried out that include various filters (Median, Gaussian and Wiener filter). To validate the outcomes of medical image de-noising, both objective (quantitative) and subjective (qualitative) tests were used. Since the noise levels are scanner-dependent, this study has underlined several significant parameters to be considered in a generic de-noising algorithm for MRI and ultrasound modalities.

[Full Text](#)

Title: A high utility sequential pattern mining in sequence datasets

Author (s): R. Aroul canessane, N. Anbarasi and N. Abinaya

Abstract: Mining sequential pattern is a critical exploration issue in information mining and learning disclosure with expansive applications. High utility successive example mining is a developing point in the information mining group. Contrasted with the great successive arrangement mining, the utility structure gives more useful and noteworthy learning subsequent to the utility of a grouping demonstrates business esteem and effect. Nonetheless, the presentation of "utility" makes the issue in a general sense not quite the same as the recurrence based example mining system and realizes emotional difficulties. In spite of the fact that the current high utility consecutive example mining calculations can find every one of the examples fulfilling a given least utility, it is regularly difficult for clients to set an appropriate least utility. A too little esteem might create a huge number of examples, though a too huge one might prompt no endings. In this paper, we propose two new calculations: "UtilityLevel (UL) is a high-utility successive example mining with a level-wise competitor era approach, and Utility Span (US) is a high-utility consecutive example mining with an example development approach".

[Full Text](#)

Title: Comprehensive performance analysis of leakage gate MTCMOS sequential circuits using sleep transistors

Author (s): P. Sreenivasulu, K. Srinivasa Rao and A. Vinaya babu

Abstract: There exist numerous techniques to reduce power consumption in sequential circuits. Major contributing factor for

power consumption in these circuits is the clock and its effective management. To overcome this challenge methods such as clock gating, power gating and multi threshold are adopted in the design of these circuits. Effective implementation of sleep transistor logic also ensures the optimum utilization of the power in a design. This paper emphasizes and analyzes this implementation comprehensively in leakage gate MTCMOS sequential circuits. This work has been carried out on Virtuos platform and the simulation results give the better comparison of performance in various designs. This analysis fixes the challenge of reducing power consumption in sequential circuits in a most comprehensive manner.

[Full Text](#)

Title: 2-D object recognition using surveillance video processing on Daubechies wavelet decomposition

Author (s): Yashvanth kumar, Vara Prasad and Sakthi Prabha R.

Abstract: The project suggests effective motion recognition built on background subtraction using dynamic threshold approach with mathematical morphology. Here the techniques frame differencing, dynamic threshold based detection will be used. In addition to dynamic threshold, mathematical morphology is also used within ability of greatly attenuating color dissimilarities has generated by background motions while still highlighting moving objects. After the object foreground detection, the parameters like velocity motion, speed will be determined. Finally the simulated results will be shown that used background subtraction with daubechies wavelet decomposition approach is effective rather than previous background subtraction methods.

[Full Text](#)

Title: The variability of fuzzy aggregation methods for partial indicators of quality and the optimal method choice

Author (s): Mikhail V. Koroteev, Pavel V. Tereliansky, Oleg I. Vasilyev, Abduvap M. Zulpuyev, Kadanbay Baktygulov and Beishenbek S. Ordobaev

Abstract: This article examines the process of evaluating the integral index of the software quality using the method of fuzzy aggregation of multiple private indicators. The aim of the study is to determine the applicability of this approach in practice and research of its formalization and algorithmization approaches. A set of aggregation algorithms in the fuzzy inference model was used and their comparison in the application to the given problem is provided. Various modifications of the standard algorithm of fuzzy inference using fuzzy set operators, as well as different kinds of norms and conforms are considered. The study has revealed a wide variation of aggregation methods and provided the method of selecting the optimal one based on the comparison with standard numerical grades. The applicability of the methods of fuzzy logic was shown in the mathematical explanation of the decision making process, opening up the possibility of fuzzy-linguistic description of the subject area, private alternatives indicators and target vector formalizing.

[Full Text](#)

Title: Spacecraft control system with increased potential of robust stability in the class of single-parameter structurally stable maps

Author (s): Beisenbi, G. Uskenbayeva, A. Shukirova and J. Yermekbayeva

Abstract: The article presents a new approach to construction control systems for objects with uncertain parameters in the form of single-parameter structurally stable maps of catastrophe theory to synthesize highly efficient control system, which has an extremely wide field of robust stability. Geometric interpretation of Lyapunov's theorem second method and definition of system stability allowed to present initial dynamic system in the form gradient system, whereas Lyapunov's function was presented in the form of potential function from catastrophe theory. Based on the above, universal approach is proposed for development and research of control system with increased potential of robust stability for spacecraft with linear and nonlinear models.

[Full Text](#)

Title: An android application for efficient e-question bank

Author (s): M. Lakshmi, Abhinayaa E. and Aiswariyaa Sruthi E.

Abstract: Normally people's actions are complicated being unplanned, planned in nature. The talent to organize all the activities without inconsistency is preferred by everyone, due to its time administration. Time management is a needed objective for successful people. In the same way examination [11] method is important for students and education institutions to evaluate the students' performance. Thereby the exam nature would identify the student's quality by institutions. Exam preparation is very important and challenging for every student. When students start preparing for their exams, they normally refer the existing year's question papers to discover the question pattern, get idea of question models and find the frequent questions etc. To make these work easier, we provide the solution by an android application using efficient e-question bank system particularly for Sathyabama University. Our suggested system [12] uses searching algorithm and frequent questions mining algorithm for the application. This application is mainly built for students of Sathyabama University to search and download the previous year question papers. This proposed system also provides options for identifying the frequently asked questions from previous year question papers. Here we use Lucene scoring algorithm to extract the students-requested question papers from e-question bank data base and Apriori algorithm is used to mine the frequent questions from the old question papers.

[Full Text](#)

Title: Application of face detection system for passenger counting in lifts using Haar features

Author (s): N. V. Rajeesh Kumar, G. Dhana Sekar and M. Dennis

Abstract: Face detection is currently used technology and has a wide range of application. This paper presents a methodology for maintaining the elevator capacity based on computer vision. In this paper face detection is done by detecting facial features such as face shape and human eye position. Haar like algorithm is used to detect the face which relies on Viola-Jones face detection algorithm.

[Full Text](#)

Title: Design, development and precision scanning of single DOF flexural mechanism using double flexural manipulator

Author (s): Sharad S. Mulik, Suhas P. Deshmukh, Mahesh S. Shewale and Avinash M. Badadhe

Abstract: Flexural mechanism generate motion based on the flexibility of the elements which offers advantages such as friction-free motion, zero backlash and high order of repeatability. Various attempts had been made to design, develop flexural

mechanism for precision applications. Present article discuss about the design of such flexural mechanism using double flexural manipulator (DFM). Here, DFM is designed using classical as well as numerical approach to achieve straight line motion. DFM consists flexural manipulator, actuator (VCM i.e. Voice Coil Motor), optical encoder and high speed data acquisition microcontroller dSPACE DS1104 R and D Controller Board. Further, DFM is manufactured and integrated with dSPACE DS1104. Experimental investigation is conducted and experimental parameters are estimated which are having close match with theory as well as numerical FEA analysis. Frequency response system identification is conducted and experimental transfer function is identified and validated with due experimentations. Further, PID control strategy is implemented on DFM and numerous experiments are conducted to test its precision positioning at high speed of the scanning. It is observed a positioning accuracy of less than 2 microns at scanning speed of 2 mm per second (low speed scanning) and precision position of less than 5 microns at 60mm per second (high speed scanning).

[Full Text](#)

Title: Tapered slot CPW-FED notch band MIMO antenna

Author (s): M. L. S. N. S. Lakshmi, B. T. P. Madhav, Habibulla Khan, N. Sai Sri Vasanthi, Anuja Bamra

Abstract: A coplanar waveguide fed notch band antenna is proposed in this paper to notch WLAN operating band. A tapered step ground with notched circular patch is used in the proposed antenna design to get notch band characteristics. Half wavelength slits are introduced inside the tapered slot ground and in the circular patch respectively. An FR4 substrate material is used to prototype the proposed model and measured the S-Parameters on ZNB 20 vector network analyzer. The modified model is notching the band from 4GHz-7GHz in which WLAN operating band is there. The proposed antenna has lower cross polarization with excellent impedance bandwidth in the operating band.

[Full Text](#)

Title: Secure Quality of Service aware routing in MANET based on collaborative trust mode

Author (s): D. R. Jijimol and S. Behin Sam

Abstract: Mobile ad hoc network (MANET) is a self-organized system comprised of mobile wireless nodes. All nodes act as both communicators and routers. Due to the absence of centralized administration in MANETs, communications between nodes are vulnerable to attacks by malicious nodes. In order to decrease the hazards from malicious nodes, recently researchers have given more importance to the concept of trust and recommendation in MANETs. In these models, the recommendations are prone to issues such as recommender's bias, honest-elicitation, and free-riding. In this paper we have tried to build a simple collaborative trust model to minimize those issues. This model is used to evaluate the trust of a node based on the trust value given by the neighbors. Weights are given to the trust value based on the trust degree of neighbors. The data packets get forwarded towards destination through the path having greatest trust value. The effectiveness and efficiency of the algorithm is demonstrated through an extensive simulation experiment and results are analyzed based on the Quality of Service metric.

[Full Text](#)

Title: Continuous Sign Language recognition from tracking and shape features using FIS and ANN

Author (s): D. Anil kumar, P. V. V. Kishore, A. Harini, K. Raviteja, N. Roja Sneha, B. Ashok Reddy and M. V. D. Prasad

Abstract: Fuzzy and Neural Network based classification of continuous sign language videos with simple backgrounds trained with hybrid features is the focus of this work. Tracking and capturing hand position vectors is the artwork of horn schunck optical flow algorithm. Active contours extract shape features from sign frames in the video sequence. The two most dominant features of sign language are combined to build sign features. This feature matrix is the training vector for Fuzzy Inference Engine (FIS) and Artificial Neural Networks (ANN).The classifiers are tested with 50 signs in a video sequence. Ten different signers created 50 signs. Different instances of FIS and ANN are tested with different combination of feature vectors. The results draw comparisons between FIS and ANN classifiers for Continuous Sign Language. A word matching score (WMS) gauges the performance of the classifiers. A 90.8% average matching score is reported for FIS and 91.2% for ANN.

[Full Text](#)

Title: Wireless sensor based GPS mobile application for blind people navigation

Author (s): Sunaina Vasireddy, Vyshnavi Ravipati, T. Ravi and G. Jegan

Abstract: As the technology is increasing and depending would be a great problem, and for blind people it becomes so difficult to survey on this planet. When the blind people are in a critical position, it becomes very difficult for them to navigate themselves and survive. In order to help them in navigation this project has been implemented. Electronic devices which include sensors and other devices will be used to detect the obstacles and give information. Usage of different sensors are been used which will be detecting the obstacles in the environment. These will be controlled with the help of Raspberry Pie. The sensed signals will send to the mobile application using Bluetooth. Hence, the required information will be processed to voice which would help the blind for navigation. This system will helps for visually impaired can make an independent travel.

[Full Text](#)

Title: Lightweight clay brick ceramic prepared with bagasse addition

Author (s): Sutas Janbuala and Thanakorn Wasanapiarnpong

Abstract: We successfully prepared lightweight clay brick with the addition of bagasse (5, 10, 15, and 20 wt%) at different firing temperatures (700, 800, 900, and 1000 °C). Higher bagasse contents resulted in higher values of porosity and water absorption, while reductions in thermal conductivity and bulk density were observed. In contrast, the increased firing temperature gave a decrease in porosity and water absorption, and higher thermal conductivity and bulk density. Porosity and water absorption were maximized with 20 wt% bagasse and a firing temperature of 700 °C. Lightweight clay brick containing 10 wt% bagasse prepared at a firing temperature of 1000 °C gave the required bulk density (1.11 g/cm³), compressive strength (8.14 MPa), and water absorption (20.96%) to meet the Thai industrial standard of lightweight brick C10 TIS 2601-2013.

[Full Text](#)

Title: Characterization of hydroxyapatite/polypyrrole/poly (caprolactone) based solvent cast thin films

Author (s): Alireza Lari and Naznin Sultana

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|--------------------|--|
| Abstract: | This study addressed the fabrication of thin films composed of Polypyrrole (PPy), hydroxyapatite (HA) and poly (?-caprolactone) (PCL) via solvent casting method. The polymer and composite films were subsequently characterized in terms of morphology, wettability and water uptake properties using different techniques. The characterization of the thin films were determined using a Scanning Electron Microscope (SEM), Energy Dispersive X-ray (EDX), water contact angle and water uptake. The addition of HA and PPy reduced the hydrophobic properties of PCL in the thin films. An energy dispersive x-ray (EDX) analysis supported the existence of HA in composite thin films. Water uptake of PCL thin film was lower than HA/PCL and HA/PPy/PCL composite thin films. |
| | Full Text |
| Title: | Current fed full bridge soft switching grid connected solar based push pull inverter |
| Author (s): | P. Hemkumaran, G. Nagarajan |
| Abstract: | This paper proposes the Current fed full bridge soft switching grid connected solar based push pull inverter with high efficiency and good transient and dynamic response. This paper also aims to formulate a comparative study of the conventional open loop & proposed method and its performance analysis is done by the use of MATLAB. Compared to the conventional method, full bridge rectifier is used to improve high output power. In critical loads, the time domain specifications play a major role which otherwise damage the system performance. Thus, the analysis is made from the conventional and proposed converter with PWM pulse technique current fed push pull grid inverter. Circuit simulations and experimental results are shown to have excellent agreement with the fundamental analysis. |
| | Full Text |
| Title: | An interactive utility tool for placement cell management |
| Author (s): | Paul Pringle A., Pothi Raja M. and A. Pravin |
| Abstract: | Every University has a separate faculty for planning and organizing placement activities for students. In order to provide information to students they would have created an email group for their students. But this method has some serious flaws such as, messages sent in these group is not received by a majority of students. This flaw can be overcome by building a messaging application for placement cell. Other than this messaging system this application will also provide a query system where students can post their queries. It will also provide information about previous year campus recruitments, practice test links for training purposes and information about the faculty's working in placement cell. |
| | Full Text |
| Title: | Node behavior monitoring and removal of faulty nodes in wireless network |
| Author (s): | Prachi Sudam Hule, Mohinee Kumari and Prem Jacob |
| Abstract: | There is a rapid increase in demand for applications that use wireless networks to generate packets with delay constraints. In addition, the node behavior monitoring mechanism needs to consider the reliable and unreliable nature of nodes, differing from one link to another. Furthermore, for increasing the security of transmission among the links we encrypt the packets before they are transmitted through the selected path. Based on this prototype the link quality of every node is analyzed and identification of reliable and unreliable link nodes is done. |
| | Full Text |
| Title: | Study on the thermal performance of a 10W LED fog lamp |
| Author (s): | W. S. Shim and Y. L. Lee |
| Abstract: | These days the LED (light emitting diode) is being actively employed in automobiles, due to its wide range of color expressions and excellent durability compared to other conventional light sources. In this study, CFD and other experiments were conducted with the aim of achieving improved thermal performance of 10-Watt grade LED fog lamps. First, three types of heatsink were considered to examine the differences in thermal performances based on the shape of the heatsink. In addition, two PCBs were also compared one with the LED module attached to one side, and other with LED modules on both sides. The analytical result of this study showed that the circular type heatsink with LED modules attached to both sides of the PCB had the highest thermal performance. A prototype of a 10-Watt fog lamp was then produced based on the CFD analysis, and thermal experiments were conducted on the prototype lamp. The results showed that the LED junction temperature of the prototype remained below the marginal junction temperature. |
| | Full Text |
| Title: | Handling Data Skew in Map Reduce Using Hadoop LIBRA |
| Author (s): | Lakshmi Priya V. and Rajalakshmi V. |
| Abstract: | There are many efficient tools significantly uses Map Reduce applications that assigns data with their corresponding tasks in parallel and distributed data processing. LIBRA symbolizes the lightweight problems of data skew with input data applications that can overlap map and reduce strategies. This is one of the innovative and accurate distribution methods for intermediate data sampling with normal steps of processing data. LIBRA has trivial overheads for output data that balances loads of computing resources. In this paper we propose the method for handling Data Skew in Map Reduce Using Hadoop in LIBRA to show the effectiveness of Hadoop on Web Crawling of Large Datasets form Web Servers. Map Reduce processes huge a set of data efficiently to establish its subsistence. The large job is divided into many small tasks and they are assigned to various nodes to perform parallel processing. Applications and Frameworks of Map Reduce. Straggler Process causes time delay. Data skew refers to the disparity in the amount of data assigned to each task, or the existence of inequality in the amount of work required to process such data. Data sets in the real world are often skewed. |
| | Full Text |
| Title: | Evenness in transport service ranking using Diversity Index |
| Author (s): | K. R. Sekar, R. Ghurucharan and S. Depak |
| Abstract: | Tourism has always been one of the most important elements of pleasure for human beings. While planning tours, people usually concentrate only on the mode of transportation and not on the service offered by the transportation. Hence, if one does not give importance to the service quality, one would have to experience a terrible travel. This paper deals with a number of transport services for selected tourist destinations from a particular source. The attributes which |

validate a transport service were collected from various travel websites and the set of important attributes were chosen by feature selection using Principle Component Analysis (PCA) method. Then, the transport services for each selected tourist destination were ranked based on the selected attributes using crisp and fuzzy ranking methods. Finally, the transport services in which each of its attributes were given equal importance were determined using Simpson's Diversity Index (SDI). Evenness is the term that is used to denote the 'equal importance' factor. SDI is the best approach to determine this evenness in any ranking method.

[Full Text](#)

Title: Algorithms for management objects in orthogonal packing problems

Author (s): Vladislav A. Chekanin and Alexander V. Chekanin

Abstract: This paper contains proposed algorithms for constructing packing schemes applicable in solving of any orthogonal packing and rectangular cutting problems which are very actual in industry and economics. Usually for packing problems of different dimensions are used various packing models designed especially for each dimension. The described packing representation model allows managing of orthogonal objects of arbitrary dimension and fully describes all free spaces of packed containers in solving of one-, two-, three- and more dimensional orthogonal packing problems which ensures a maximal complete description of containers' state in time of packing. The algorithms of placing and deleting of the orthogonal objects are realized in applied software especially created for analyzing of efficiency of application of heuristic and met heuristic algorithms used for optimization of orthogonal packing problems.

[Full Text](#)

Title: Query optimization technique for videos in relational database

Author (s): Mercy Paul Selvan, Lokeshwaran S. and Kalai Selvan P.

Abstract: PrefDB, "an inclination mindful social system that direct and successfully handles questions with slants". In its inside, "PrefDB uses a slant careful information model and variable based math, where slants are managed as top notch natives". We portray "a reference using a condition on the tuples affected, a scoring limit that scores these tuples, and an assurance that shows how beyond any doubt these scores are". In our information model, tuples pass on scores with confidences. Our polynomial math incorporates the "standard social directors extended to handle scores and confidences". For example, "the join executive will join two tuples and register another score-sureness pair by combining the scores and confidences that go with the two tuples". Additionally, our variable based math contains another administrator, favor that surveys a slant on a connection, i.e., "given as inputs a connection and a slant on this connection, incline toward yields the association with new scores and confidences". In the midst of slant appraisal, "both the unforeseen and the scoring part of a slant are used". The prohibitive part goes about as "fragile" basic that makes sense of "which tuples are scored without blocking any tuples from the request result". Thusly, PrefDB secludes slant evaluation from tuple isolating. It permits us to characterize the logarithmic properties of the incline toward administrator and manufacture nonspecific inquiry advancement and handling methodologies that are appropriate paying little respect to the kind of reference determined in a question or the normal sort of answer. The principle point of this paper is to propose and give a few inquiry enhancement systems to broadened question arranges and portray an inquiry execution calculation that mixes inclination assessment with inquiry execution, while making viable utilization of the local question motor.

[Full Text](#)

Title: Assessment of Jebba Hydropower Dam Operation for improved energy production and flood management

Author (s): Olukanni A. W. and Adejumo T. A. and D. O. Salami

Abstract: One of the reservoir management options for flood moderation and energy production is the operation of Hydropower Dams to protect people and their socio-economic activities in flood plain areas. This study focuses on assessing Jebba Hydropower Dam Operation for improved energy production and flood management. Available Data for 27-year period (1984 - 2011) such as inflow, elevation, turbine release, generating head, energy generation, tailrace water level and plant coefficient was obtained from Jebba Dam Station. The present reservoir operating rule was investigated using statistical analysis to model the operation of the multi-purpose reservoir. Statistical tests carried out in accordance with standard procedure include chi-square (χ^2), probability plot coefficient of correlation (r), and coefficient of determination (R^2). The results show that the optimal solution at operating performance of 50% reservoir inflow reliability has the total annual energy generation of 42105.63MWH with adequate water supply for downstream users and for irrigation throughout the year with annual optimal evaporation losses averaged at 58.16Mm³. Average optimal energy generation obtained is 19% of the observed energy generation but with adequate water supply for downstream users and for irrigation throughout the year. It is, therefore, essential to develop a decision-making framework capable of handling the conflicting demands.

[Full Text](#)

Title: Proposition of a methodology to evaluate the performance of the production process via performance indicators of both the production process and reverse chain process

Author (s): Faycal Mimouni and Abdellah Abouabdellah

Abstract: The production process represents the core of every industrial company. And each company strives to improve the critical process of production. The purpose of this work is to propose a methodology to evaluate the performance of the production process via performance indicators of both the production and the reverse chain process. The first part of the article presents the problems studied. The second part describes the literature review of reverse logistics and performance indicators. The third part highlights the interest of this study in the industrial field. The fourth part shows the different steps of the proposed methodology and the proposed performance indicators and its application to a case study followed by an analysis of the results obtained. The last chapter represents the conclusion and the research opportunities of this paper.

[Full Text](#)

Title: Determination of optimum sterilization condition based on calculated heat transfer rate for palm oil mill process

Author (s): Arif bin Ab Hadi, Dato' Ir. Abd. Wahab Mohammad and Ir. Mohd Sobri Takriff

Abstract: The study of temperature distribution inside sterilizer cage was conducted previously in order to improve the heat transfer efficiency during sterilization process based on calculated heat transfer rate at various locations inside sterilizer cage. In this study, further research was conducted based on laboratory experiment to investigate the optimum condition to achieve satisfactory sterilization based on the temperature profile inside FFB and the percentage of total loose fruit per total fruit let. The experiment was conducted at different sterilization time of 40, 50, 60 to 70 minutes excluding 5 mins de-aeration period. The result suggests that the optimum heat transfer towards FFB were determined to be 248kJ/kg at estimated sterilization time of 60 minutes, which corresponds to 90% of total fruit let stripped per

total fruit let in one bunch. The result obtained was used to determine the minimum sterilization time required inside the mill sterilizer cage for satisfactory sterilization condition based on the optimum heat transfer rate obtained in this study.

[Full Text](#)

Title: Video based facial spoof attacks detection using local binary pattern

Author (s): Jeba J., Naga Visaradha Nalam and G. I. Shamini

Abstract: The identification of video source is very important for video validation evidence, tracking down video piracy crimes and regulating individual video sources. User authentication is an important step to protect information and in this context, face biometrics has more advantage. Face biometrics are natural, intuitive, easy to use and less human invasive. Unfortunately, recent work has face biometrics vulnerable to spoofing attacks using cheap low-tech equipment. We have introduced a method for face spoofing detection using spatiotemporal (dynamic texture) extensions of highly popular local binary pattern operator. With wide deployment, face recognition systems has been used in applications from border control to mobile device unlocking and laptop device unlocking. The combat of video spoofing attacks requires increased attention. We address the problem of video spoofing detection against replay attacks by using the aliasing analysis in spoofed face videos. We analyze the texture pattern aliasing that commonly appears during recapture of video or photo replays on screen in different channels (R, G, B and grayscale) and regions. Multi-scale LBP and SIFT features determines the texture patterns characteristics which differentiate a replayed spoof face from a live video (face present). We have introduced effective approach in face spoof detection both cross-database, and intra-database testing scenarios (video) and shows better comparison since we compare the edge pixel values and depth of pixel values of the authenticated person with the image stored in the database.

[Full Text](#)

Title: Efficient searching in social Internet of Things

Author (s): N. V. Rajeeshkumar, D. sindhujadevi and M. Thendralpreethi

Abstract: The "Internet of Things" (IoT) incorporates countless and pervasive items that ceaselessly produce data about the physical world. A large portion of this data is accessible through standard Web programs and a few stages officially offer "application programming interfaces" (APIs) for getting to "sensors and actuators". When objects communicate with one another and share data via social networks, this can open up tremendous opportunities for companies to create better, more useful experiences in the new digital realm. In Social systems and Internet of Things (SIoT), all things can be mingled. Social connections can be set up in the middle of individuals and things, and in the middle of things and things. Later on, individuals will live in the digital physical social hyperspace. SIoT can understand pervasive detecting and processing past the capacity of distinctive individuals or things, and animate advancements in these fields. In this paper, we collaborate offline social networking for query search over MANET through social Internet of things. Query results are got by a novel friend selection algorithm in distributed MANET network.

[Full Text](#)

Title: Bidirectional communication in Li-Fi technology

Author (s): Bharath B., Yaswanth Digumarthi, Ravi T. and G. Jegan

Abstract: Li-Fi represents Light Fidelity; Li-Fi technology is a milestone in the history of wireless communication system. Since the number of people using wireless internet has increased, the network speed is reduced. Wi-Fi uses RF bandwidth which has more traffic so the possibility for interference is more. This can be overcome by using Li-Fi technology which implements transfer of data through simple light source (LED). Li-Fi uses LED for transmitting wirelessly, this method is called Visible Light Communication (VLC). It provides large bandwidth, security and low cost compared to other wireless communication systems. The systems using Li-Fi technology are Unidirectional which lacks in getting acknowledgement. This paper describes the Bidirectional implementation of Li-Fi technology for transmitting data in the form of text and image.

[Full Text](#)

Title: Design and performance analysis of Csla using adiabatic sub threshold logic gates

Author (s): Vinay kumar S., Karthick C. and P. Anil kumar

Abstract: Digital sub threshold logic circuits can be recycled for applications in the ultra-low power end of the design spectrum, where presentation is of secondary position. A sub threshold digital circuit accomplishes to gratify the ultra-low power requirement because it uses the escape current as its effective switching current. This minute leakage current, though, it limits the extreme presentation at which the sub threshold circuit can be operated. Sub-threshold CMOS theory is a system which can decrease the power feeding to lower than threshold voltage specified. The adiabatic logic circuit is a system to decrease energy feeding by overpowering the voltage applied to the resistance of the circuit. In this it suggests that sub threshold adiabatic logic strategy implementation of carry look ahead adder. The simulation result is done in Cadence Virtuoso tool at 90nm technology.

[Full Text](#)

Title: Feature extraction and pattern identification of silent speech by using MFCC, DTW and AI algorithms

Author (s): Diego Alfonso Rojas, Olga Lucia Ramos, Joao Mauricio Rosario

Abstract: At present are many the ways of communication, that allow the interaction among people of the same society, a particular case of these communication ways appears the silent speech, but it is still in study and development. Silent speech, is to acquire the signals generated in the vocal apparatus before a sound occur, in order to establish a channel of information transmission in environments with a considerable amount of noise or among people whose ability to emit sounds is limited due to various pathologies. In this work the results of capturing and analyzing signals of silent speech, with the aim of identifying phonological units of Spanish language are presented. Initially the signals acquisition was performed by NAM microphone, for further processing with feature extraction techniques like MFCC (Mel Frequency Cepstral Coefficients) and DTW (Dynamic Time Warping), which provided the necessary data for training the neural network for the pattern recognition task. The classification algorithm was trained with the data of 9 test subjects, all of the male gender, with 5 samples from each of the three phonological units that want to be recognized ('Uno', 'Dos', 'Tres'), as a final result the algorithm is able to classify and identify patterns with a success rate over 85%.

[Full Text](#)

Title: Unsupervised concept hierarchy induction based on Islamic glossary

| | |
|--------------------|--|
| Author (s): | Ammar Abdulateef Ali and Saidah Saad |
| Abstract: | <p>A machine-readable dictionary (MRD) is an electronic dictionary that enables query processing. One of the common processing tasks that has been widely applied is Concept Hierarchy Induction which aims at identifying concepts with its corresponding taxonomies such as named entities, synonyms and hyponyms. The Islamic domain contains a variety of concepts that are associated with numerous taxonomies. The existing concept hierarchy approaches for Islamic domain are using limited linguistic patterns. This study aims to propose an unsupervised concept hierarchy induction for the Islamic domain by extending the patterns and rules. In fact, Term Frequency-Inverse Document Frequency (TF-IDF) was carried out in order to identify the most frequently used concepts. Furthermore, two syntactical features were used including POS tagging and chunk parser in order to identify the tagging for each word (e.g. verb, noun, adjective, etc.) and extracting Noun Phrases (NP). Hence, the proposed extension patterns aim at utilize lexico-syntactic patterns to induce the concept hierarchy. The evaluation was performed using precision method by identifying the number of correctly extracted concepts and relation between them. Moreover, an expert review evaluation was performed by an expert in the Islamic domain. The experimental results showed that the proposed method achieved 82% precision. That demonstrates the usefulness of extending patterns for the Islamic domain.</p> <p>Full Text</p> |
| Title: | Design analysis and optimization of Front axle for commercial vehicle using CAE |
| Author (s): | M. Ruban and S. Sivaganesan |
| Abstract: | <p>In the global competition, it is very important for the manufacturer to bring new product designs to market at a faster rate and at reduced cost. Up to 40% of the vehicle load carrying capacity is taken up by the Front axle beam. Therefore, optimization of front axle beam is necessary to improve strength to weight ratio for a given factor of safety without altering any assembly parameters. This is being achieved by using high-end optimization tool hyper mesh optistruct. Shape optimization tool in hyper mesh optistruct is used for analysis. In these work Design parameters such as Wheel track, King pin center, spring center, Weight of the axle and Rated load of axle was analyzed. The performance parameters such as stress, strain and displacement are measured by applying the vertical load, vertical and braking combined load and vertical and cornering combined load. The life cycle and strain value of the axle beam is analyzed.</p> <p>Full Text</p> |
| Title: | Subtractive clustering based feature enhancement for isolated Malay speech recognition |
| Author (s): | C. Y. Fook, M. Hariharan, Sazali Yaacob and Adom A. H. |
| Abstract: | <p>This paper proposes a new hybrid method named SCFE-PNN, which integrates effective subtractive clustering based features enhancement and probabilistic neural network (PNN) classifier, had been introduced for isolated Malay word recognition. The proposed method of subtractive clustering features weighting is used as a data preprocessing tool, which designs at diminishing the divergence in features of the Malay word dataset, in order to further improve the recognition accuracy of the PNN classifier based speaker-dependent and speaker-independent mode. In this study, the mel-frequency cepstral coefficients (MFCCs) were extracted from the selected Malay word. The experimental results show the effectiveness of the proposed SCFE technique. The proposed method shows promising average results of 99.61% (Speaker Dependent) and 96.21% (Speaker Independent) in distinguishing between the selected Malay words.</p> <p>Full Text</p> |
| Title: | Operational design and modelling of fire event tracking system in wireless sensor networks |
| Author (s): | Omar Fouad Mohammed, Burairah Hussin and Abd Samad Hasan Basari |
| Abstract: | <p>In recent years, WSNs have been widely used for monitoring of environmental changes as they are capable of combining their sensing of a phenomenon with their computational functions and operate with limited resources to accomplish an intended task. Sensors can cooperatively monitor the surrounding environment and provide data that help in realizing the time evolution of the phenomenon and anticipating its effects. Consequently, such information would facilitate performing control actions that meet the predetermined goals. As distributed computing enables the exchange of real time data statistics obtained from various sources that need to be combined together to infer real abnormal conditions for management decisions. As tracking of an event depends on the event type, high-accuracy localization of an event such as fire is a serious challenge, where most of traditional detection systems depend on visualization (cameras) in making their control decision. Moreover, those systems concern the continuous detection of fire and do not provide reliable and feasible mechanism for tracking fire spread. This paper presents the design and modelling of a fire event tracking system that consists of indoor distributed sensor nodes and a powerful intelligent processing unit (controller) to detect fire events and compute information to provide desired safety decisions. Whenever the temperature in a premise increases, the system deploys cooperative centralized control functions to collect and process data statistics related to the fire. It exchanges direction, velocity, and/or position to take proper decision such as evacuating people from fire areas to a safe exit.</p> <p>Full Text</p> |
| Title: | The effect of fumigation toward the engagement ability of king pineapple leaf fiber (agave cantala roxb) with epoxy matrix |
| Author (s): | Musa Bondaris Palungan, Rudy Soenoko, Yudy Surya Irawan, Anindito Purnowidodo |
| Abstract: | <p>The purpose of this study is to find out the fumigated king pineapple leaf fiber (KPLF) engagement capability behavioral (IFSS) toward the epoxy matrix. The king pineapple leaf fiber fumigation treatment was under a time length of 5, 10, 15, 20 hours with the source of smoke from burning coconut shells and also comparing the KPLF without any fumigation treatment. KPLF without and with fumigation treatment was observed by SEM to determine the ability of the fiber engagement to the epoxy matrix and also for the KPLF surface morphology. The tensile test was conducted to determine interfacial shear strength by embedding a single king pineapple leaf fiber into the epoxy matrix as deep as 1 mm. The test result shows that the fumigation treatment causes the fiber surface becomes coarse, wrinkled, forming uneven grooves in a longitudinal and transverse direction. This condition would improve the KPLF and epoxy matrix engagement ability. The epoxy matrix interface shear stress (IFSS) with the untreated KPLF is a big as 4.48 MPa and for the KPLF treated for 15 hours the shear stress is as big as 17.15 MPa.</p> <p>Full Text</p> |
| Title: | The dual nozzle Cross Flow turbine performance |
| Author (s): | Corvis L. Rantererung, Sudjito Soeparman, Rudy Soenoko and Slamet Wahyudi |
| Abstract: | <p>A Cross flow turbine is the most popular micro power plants because of the simple construction, reliable, but until to now, the turbine performance is still low compared with other water turbines. The purpose of this study was to examine</p> |

the increase of the cross flow turbine with a dual nozzle as a hydro power generation performance. The research method is by testing and analyzing the dual nozzle Cross flow turbine performance. The Cross flow turbine best performance obtained in this study is that the best efficiency and optimal cross flow turbine with a dual nozzle of 78.80%. While the efficiency for a single nozzle cross flow turbine mounted horizontally is a little bit lower which is about 70.78%. While for the single nozzle cross flow turbine with a vertical position has the lowest efficiency of 61.92%.

[Full Text](#)

Title: Ordering objects on the basis of potential fuzzy relation for group expert evaluation

Author (s): B. Kh. Sanzhapov and R. B. Sanzhapov

Abstract: The problem of ordering objects (determination of importance coefficients) indecision support systems is often connected with processing of expert information. The method for solving this problem with the presence of several fuzzy relations, which simulate the preferences of different expert groups, is proposed. Unlike the well-known approaches to the ordering of objects according to the fuzzy estimations of paired comparisons, the proposed method makes it possible to determine the resulting weights (potentials) of objects without the preliminary approximation of expert information. A numerical example is given.

[Full Text](#)

Title: Categorization of drugs based on polarity analysis of twitter data

Author (s): S. Rijo Meris, R. Raja Singh and J. Andrews

Abstract: According to the present scenario, social media have emerged as major platforms for sharing information in medical field, business, education etc. In the existing system, the system will generate warning for adverse drugs reactions based on the negative comments. Social media provides limitless opportunities. The drug and disease related tweets are extracted from twitter API and web crawler based on the given input. The drugs can be predicted whether it is a best drug using polarity by extracted tweets are pre-processed by removing stop words, abbreviations and replacing. By this system, the user will not know which is the good medicine. In the proposed system, the consumer will gain knowledge about the best medicines.

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Title: Secure data hiding in image over encrypted domain

Author (s): Priyanka Kumari, Preeti Reddy M. and B. Bharathi

Abstract: Steganography is a concept of hiding or concealing data in a cover object while the sender and receiver are able to communicate within themselves. The security of data has been prime concern for the people from past and many research works are still going to find out convenient methods to safeguard the communication between people. Intruder can easily detect the information in the links as internet does not have secure links. The transmission of data is required to be protected by limiting the chances for its detection while transmission. In this paper we have proposed a technique for image steganography that embeds or hides important or private messages or files into files like images, audio and video without affecting the quality of actual files. It is achieved by using the Least Significant Bits (LSB) of these files for embedding data in the portion of image, which are not used by the image viewing tools. It allows to embed the messages or files in encrypted form using steganography and uniform embedding algorithm which means that once encrypted, the message or file could be retrieved back (or decrypted) from the image only after specifying the correct password which was given by the sender at the time of embedding data into the image(or encryption).

[Full Text](#)

Title: Analysis and simulation of low power ALU design by using modified GDI technique in microchip application

Author (s): Sreenivasa Reddy M., Karthick C. and T. Hemanth Kumar

Abstract: Power dissipation incorporates a major impact whereas we have a tendency to area unit coming up with any circuit. Since this issue plays a serious role when deciding the potency of the designed circuits i.e. while during this paper we have a tendency to area unit proposing an inspiration for sequent circuits in order that we will scale back the facility dissipation. Power dissipation that successively reduces the complete power dissipation of electronic equipment. During this paper, we have a tendency to plan a reduced power 1-bit full adder (FA) with 10-transistors and this can be employed in the look ALU. The planned style consists of GDI adder based mostly on mux circuits. By exploitation low power 1-bit full adder within the implementation of ALU, the facility and space area unit greatly reduced to quite five hundredth compared to traditional style and half-hour compared to transmission gates. So, the look is attributed as a neighbourhood economical and low power ALU. In this, ALU consists of 4x1 electronic device, 2x1 electronic device and full adder calculated to implement logic controls, like AND, OR, etc. and arithmetic operations, as ADD and cypher. GDI cells area unit employed in the look of multiplexers and full adder that area unit then associated to understand ALU. The simulation results are finished T-Spice tool with TSMC018 technologies.

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Modeling of air pollutants SO2 elements using geographically weighted regression (GWR), geographically temporal weighted regression (GTWR) and mixed geographically temporalweighted regression (MGTWR) (Article)

Winarso, K.^a , Yasin, H.^b

^aDepartment of Industrial Engineering, Faculty of Engineering, Trunojoyo Madura University, Indonesia
^bDepartment of Statistics, Faculty of Sciencee and Mathematics, Diponegoro University, Indonesia JL. Raya Telang
Kamal, Bangkalan, Madura, Indonesia

Abstract

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Sulphur dioxide gas (SO²) is derived from the combustion of fuels containing sulphur. Aside from fuel, sulphur is also contained in the lubricant. Sulphur dioxide gas is difficult to detect because it is colourless gas. Sulphur dioxide can cause respiratory disorders, indigestion, headache, chest pain, and nerve. A necessary preventive measures to reduce the impact of air pollutants SO2 particular elements, one of them by making the modeling that can bring the causes and factors resistor element of air pollutants SO2. The modeling is Geographically Weighted Regression (GWR), Temporal Geographically Weighted Regression (GTWR) and Mixed Geographically Weighted Temporal Regression (MGTWR). All three models are regression models spatial, temporal and spatial temporal spatial- combined, which models the effects of air pollutants SO2 element with a direct view of geography and time of occurrence of air pollution. The third model is then compared to obtain the best model in the modeling of air pollutants SO2 elements. © 2006-2016 Asian Research Publishing Network (ARPN).

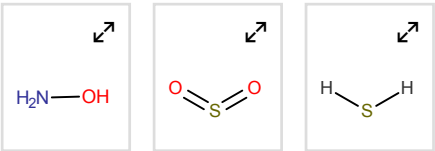
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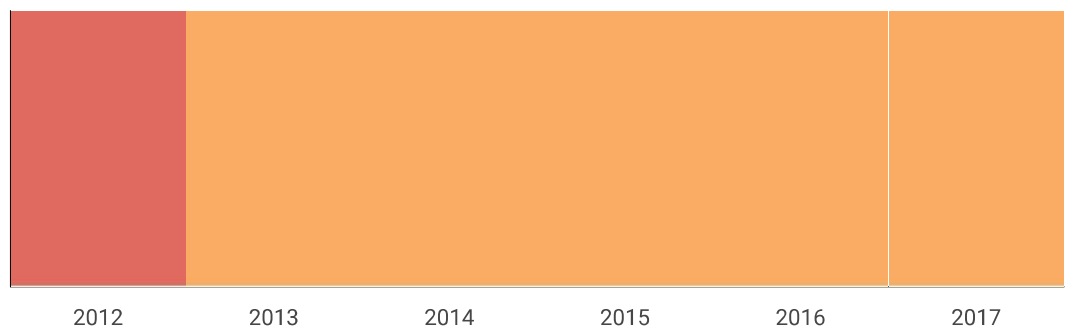
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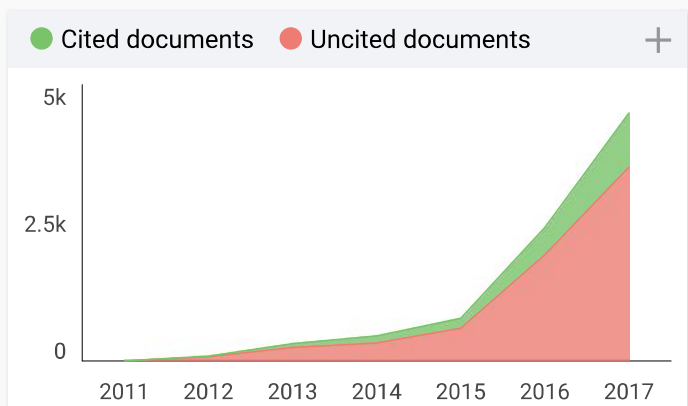
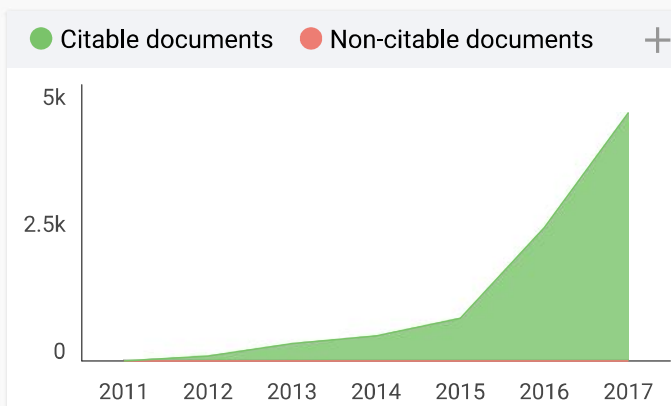
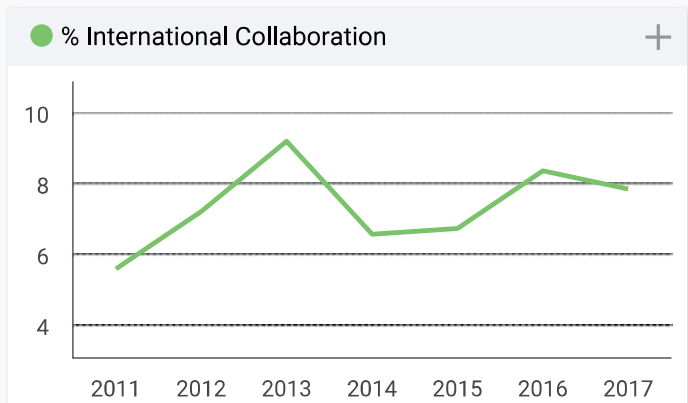
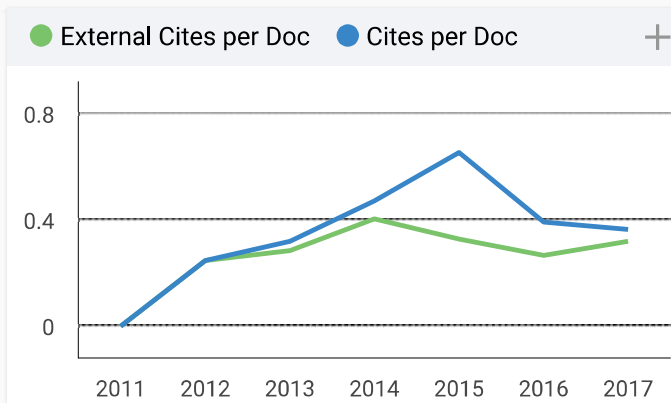
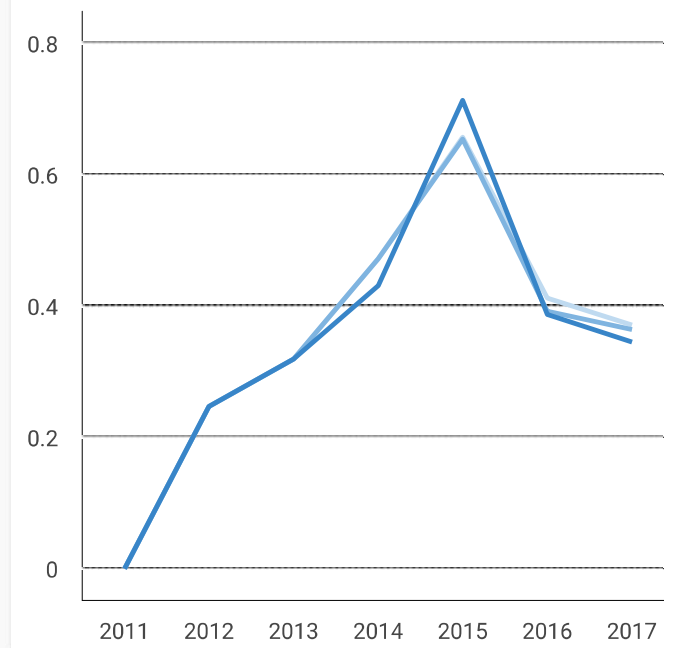
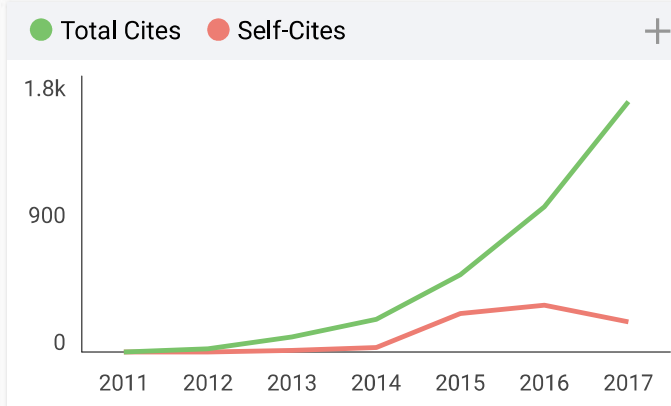
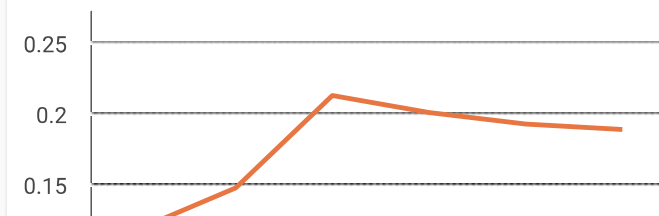


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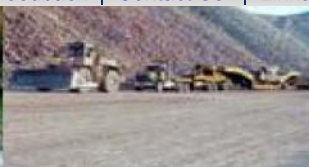
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